

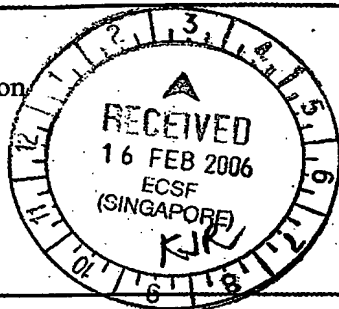
## PATENT COOPERATION TREATY

**CONFIRMATION**

From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Ella Cheong Spruson & Ferguson  
P.O. Box 1531  
Robinson Road Post Office  
Singapore 903031

**PCT**

NOTIFICATION OF TRANSMITTAL OF  
INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Rule 71.1)

Date of mailing  
(day/month/year)

06 FEB 2006

Applicant's or agent's file reference  
10104SG281/KJR(PDR)/ss

**IMPORTANT NOTIFICATION**

International application No.

PCT/SG2005/000051

International filing date (day/month/year)

21 February 2005

Priority date (day/month/year)

25 February 2004

Applicant

NATIONAL UNIVERSITY OF SINGAPORE et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translations to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the IPBA/AU

AUSTRALIAN PATENT OFFICE  
PO BOX 200, WODEN ACT 2606, AUSTRALIA  
E-mail address: pct@ipaustalia.gov.au  
Facsimile No. (02) 6285 3929

Authorized officer

**MARIE-ANNE FAM**

Telephone No. (02) 6283 2254

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 10104SG281/KJR(PDR)/ss	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. PCT/SG2005/000051	International filing date (day/month/year) 21 February 2005	Priority date (day/month/year) 25 February 2004
International Patent Classification (IPC) or national classification and IPC  Int. Cl.  C07K 14/42 (2006.01)      C07K 14/435 (2006.01)      C07K 14/765 (2006.01)		
Applicant NATIONAL UNIVERSITY OF SINGAPORE et al.		

☒ This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 9 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 12 August 2005	Date of completion of this report 23 January 2006
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  MARIE-ANNE FAM Telephone No. (02) 6283 2254

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/SG2005/000051

## Box No. I Basis of the report

## 1. With regard to the language, this report is based on:

- ☒ The international application in the language in which it was filed
- ☐ A translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1 (b))
  - ☐ publication of the international application (under Rule 12.4(a))
  - ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-5, 7-19 as originally filed/furnished
  - pages\* 6 received by this Authority on 15 August 2005 with the letter of 12 August 2005
  - pages\* received by this Authority on with the letter of
- ☒ the claims:
- pages as originally filed/furnished
  - pages\* as amended (together with any statement) under Article 19
  - pages\* 20-27 received by this Authority on 15 August 2005 with the letter of 12 August 2005
  - pages\* received by this Authority on with the letter of
- ☒ the drawings:
- pages 1/10-10/10 as originally filed/furnished
  - pages\* received by this Authority on with the letter of
  - pages\* received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

\* If item 4 applies, some or all of those sheets may be marked "superseded."

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims 1-55	YES
	Claims -	NO
Inventive step (IS)	Claims 1-55	YES
	Claims -	NO
Industrial applicability (IA)	Claims 1-55	YES
	Claims -	NO

## 2. Citations and explanations (Rule 70.7)

**Novelty and Inventive Step**

The following documents were identified in the search report:

- D1 Biophysical Chemistry
- D2 Biotechnology and Bioengineering

The present invention relates to methods for predicting crystallisation conditions for proteins and other biomacromolecules. Current methods for determining these conditions usually employ the second virial coefficient  $B_{22}$ . However this coefficient is based only on intermolecular interactions and hence does not always provide reliable results.

In contrast, the present invention uses methods that are based on both intermolecular interactions and kinetic effects. In particular, the methods monitor changes in surface tension and/or surface pressure. This enables crystallisation conditions to be predicted with greater reliability. Neither D1 nor D2 discloses methods as defined by the present claims. Consequently claims 1-55 are considered novel and inventive in view of the prior art.

**Industrial Applicability**

Claims 1-55 meet the requirements for industrial applicability.